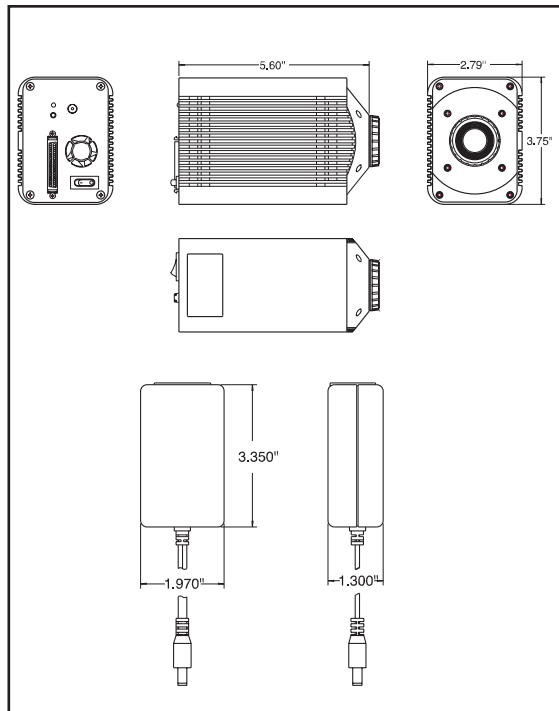


# Data Sheet



## Application

This camera is designed to replace video camera/frame grabber combinations in a cost effective single unit.

This camera is used for photo-documentation, pathology, fluorescence, and in industrial and metallurgical applications.

## Feature

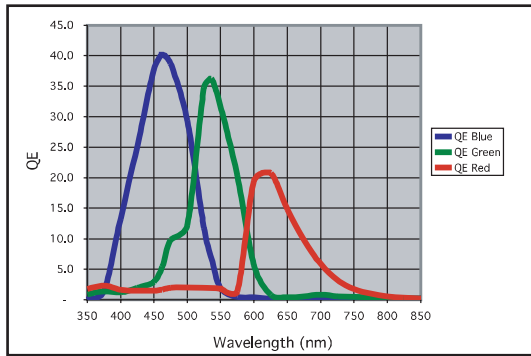
## Benefit

36 MHz live mode (dual channel 18MHz) ....	High speed imaging for real time viewing
1600 x 1200 (1.92 Mpixel) image capture ..	Resolves fine detail
Programmable gain (1-32x) .....	Facilitates live mode previews of low light specimens
10 bit x 18 MHz capture .....	Extra bit depth is ideal for image enhancement
New high quantum efficiency CCD .....	Increases sensitivity for faster image captures
Interline progressive scan CCD .....	Electronic shuttering eliminates mechanical shutter shortcomings related to speed, wear, and vibration
PCI Interface .....	Stable, high-speed interface for PC and Mac platforms is over 50% faster than Firewire™ (IEEE 1394)
SPOT™ Software .....	Provides essential tools for modern microscopy and is widely supported by 3rd party software companies for high end applications as well as providing DLL with SDK for OEM Driver development
Mac® & Windows® operating systems	
Basic & Advance Applications	
Twain & Apple Event	
DLL w/ SDK and Tutorial manual	
3rd Party Driver support	

**Insight™ Color Mosaic**

# Data Sheet

Insight™ Color Mosaic



Captured Frames per Second\*

Binning	REGION OF INTEREST		
	1600 X 1200	512 X 512	256 X 256
1 x 1	7.8	16.8	25.4

\* .04ms exposure, no post-processing, images saved to RAM on 1.7 GHz P4 running Windows XP

### CCD information:

Kodak KAI-2000-CM with cover glass  
Color mosaic progressive scan interline CCD  
1600 x 1200, 7.4 μm square pixels  
11.8mm x 8.9mm active area  
100x minimum anti-blooming

Cooling: Fan cooled heat sink

### Digitization information:

Digitized pixel by pixel at CCD sensor  
Live mode: 8 bit x 36 MHz (Dual channel)  
8 bit x 18MHz  
Color live image frame rate: 15 -19 frames per second  
Capture mode: 10 bit x 18MHz (see chart for frame rate)  
A/D Converter full scale set to 31,500 e (Gain=1)  
Saved bit depths: 24, 36, or 48 RGB; 8, 12 or 16 bit BW

### Noise specifications:

Read noise: 55 e rms  
Dark noise: 5.0 e/p/s mean value

### Exposure:

40 microsecond to 536 seconds  
Captured and live mode automatic exposure  
Captured and live mode manual exposure

Lens mount: C-mount

Sealing window: IR Filter w/ anti-reflection coating

Computer interface: PCI bus card

External shutter control: BNC TTL level output w/ delay

### Mechanical:

Tripod mount: 1/4 - 20 UNC  
Camera head: 2.79" (71mm) x 3.75" (95mm) x 5.6" (142mm), 1.4 lbs. (0.62 kg)  
Power supply: 1.3" (33mm) x 1.97" (50mm) x 3.35" (85mm), 0.34 lbs. (0.16 kg)  
Operating environment: 0 to 30°C ambient, 0-80% relative humidity noncondensing  
Power requirements: 100-240 VAC, 47-63 Hz

Certifications: CE, FCC Class A, EN60950

### SPOT software features:

Color Live mode viewing window & controls, auto-exposure live and capture modes, image capture window, predefined and custom image setups, auto white balance, flat field correction, image enhancement tools in three color spaces (RGB, HSL, HSV), pan and zoom windows, annotation, calibration mark, measurement tools, sequential image capture and playback, archiving data base, report generator, interactive print dialog, online help menu

### File formats:

BMP, TIFF, TIFF-JPEG, JPEG, JPEG-2000, PICT, AVI

### TIFF File sizes:

8 bit BW / 1.83MB	24 bit RGB / 5.49 MB
12 bit BW / 2.75 MB	36 bit RGB / 8.24 MB
16 bit BW / 3.66 MB	48 bit RGB / 10.99 MB

### Drivers included:

Twain for supported Windows® operating systems  
AppleEvent for supported Mac® operating systems

### Native drivers for 3rd party software:

Call or visit our website (www.diaginc.com)

### Minimum system requirements:

Full size PCI bus slot or PCMCIA CardBus slot\*  
\*-Requires Magma™ Adapter (sold separately)  
PC: Pentium 166 or greater w/  
Windows 95, 98, 00, NT, ME, XP  
Mac: Power PC, OS 8.6 - OS X  
RAM: 64MB minimum, 256MB suggested  
Video card: 24 bit RGB @ desired resolution

Items included: Camera head, PCI plug-in board, data cable, power supply cable, power

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